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The June 2011 meteo-tsunami in the Atlantic Ocean and the English Channel

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Meteo-tsunamis are tsunami events related to meteorological sources. They share the same physical characteristics than geological tsunamis. They are created when an atmospheric phenomenon generates surface waves while propagating at the same speed as the created oceanic wave. Destructive meteo-tsunamis occur on very favorable locations, such as Balearic Islands (local name: rissaga) or Japanese bays (akibi), where the waves amplitudes can reach more than 4 meters.
The English Channel is not well known for its meteo-tsunamis, although some evidence of casualties related to meteorological waves can be found in the local press through time.

On 27 June 2011, a small wave (amplitude of $\sim$30 cm) was witnessed on several locations along the south coast off Great Britain. Since no geological events were recorded that day (e.g., earthquake, landslide), we assume that it was a meteo-tsunami. Using tide gage records from 4 West-European countries, evidence of this meteo-tsunami can be found from the south-west coast of Portugal up to the north-east of the English Channel. Using the first wave arrival time, we underline that it traveled from South to North along the Atlantic Coast of Europe before entering the English Channel. Simple propagation modeling show that it propagated much slower than a tsunami from "geological origin" would be on this bathymetry (i.e. with a source fixed at a given initiation point). Investigating meteorological imagery, we show that a moving atmospheric disturbance over the Atlantic ocean coincides with the apparition of the phenomenon in harbors.
We propose preliminary modeling using a moving source coupled with classical models of tsunami wave propagation.